

ABSTRACT

Prior art methods for forming alt. PSMs require a relatively large number of phase assignments to avoid phase conflicts in complex arrays. This has been improved by adding dummy elements at the ends of all rows and columns of the array that is to be imaged, while initially leaving all corners open. Phases are then assigned in checker board fashion to all elements. Additional dummy elements are then placed in the open corners and assigned the same phase as their immediate neighbors. The first exposure of the photoresist is made with both the original elements and the additional dummy elements. Then additional resist is coated and exposed and the original elements are open after development. If the added elements are made somewhat smaller than the original elements, only a single exposure is used.